

ABSTRACT

A power amplifier comprises an amplifier of amplifying a high-frequency signal modulated by an input signal, an inverted envelope generating circuit generating an inverted envelope signal by using the input signal or the high-frequency signal, the inverted envelope signal having an inverted envelope, a gain variable amplifier adjusting amplitude of the inverted envelope signal, a variable delay circuit adjusting a phase of the inverted envelope signal, and a control circuit outputting a control signal to the gain variable amplifier and the variable delay circuit based on information about distortion or a signal level of the amplified high-frequency signal. The inverted envelope signal having been adjusted in amplitude or phase is injected to the high-frequency signal or the amplified high-frequency signal, and the control circuit controls the gain variable amplifier or the variable delay circuit so that distortion or a signal level of the amplified high-frequency signal is minimum.